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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,368	09/08/2003	Alex Hornig	HORN3163/EM	8242

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EXAMINER
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KERSHTEYN, IGOR

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/656,368	<b>Applicant(s)</b> HORNG ET AL.	
	<b>Examiner</b> Igor Kershteyn	<b>Art Unit</b> 3745	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 5, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Harmsen (6,017,191).

In figures 1-5, Harmsen teaches a heat-dissipating fan comprising: a casing 1 having an air outlet (not numbered), a base 8 mounted in the air outlet, an impeller (not shown) being adapted to be mounted on the base 8 and having a plurality of blades; and a plurality of guiding plates 14 mounted in the air outlet of the casing 1, the guiding plates 14 being aligned along a predetermined direction and extending in a direction having an inclining angle ( $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$ ) with an axial direction of the air outlet, the guiding plates 14 guiding airflow passing through the air outlet and increasing wind pressure of the airflow when the impeller turns.

Claims 1, 4, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Maruyama et al. (4,603,271).

In figures 1-3, Maruyama et al. teach a heat-dissipating fan comprising: a casing 1 having an air outlet (not numbered), a base (not numbered) mounted in the air outlet,

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an impeller 6 being adapted to be mounted on the base and having a plurality of blades 7; and a plurality of guiding plates 4 mounted in the air outlet of the casing 1, the guiding plates 4 being aligned along a predetermined direction and extending in a direction having an inclining angle with an axial direction of the air outlet, the guiding plates 4 guiding airflow passing through the air outlet and increasing wind pressure of the airflow when the impeller 6 turns.

Claims 1, 4, 5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Gray (4,548,548).

In figures 1, 2, 3, and 3a, Gray teaches a heat-dissipating fan comprising: a casing 22 having an air outlet (not numbered), a base 26 mounted in the air outlet, an impeller (not numbered) being adapted to be mounted on the base 26 and having a plurality of blades 16; and a plurality of guiding plates 24 mounted in the air outlet of the casing 22, the guiding plates 24 being aligned along a predetermined direction and extending in a direction having an inclining angle (see figs. 3 and 3a) with an axial direction of the air outlet, the guiding plates 24 guiding airflow passing through the air outlet and increasing wind pressure of the airflow when the impeller turns.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Struve et al. (5,096,373) in view of Harmsen (6,017,191).

Struve et al. in figures 1-4, teach a heat-dissipating fan 10 comprising: a casing 12 having an air outlet 22, a base 24 mounted in the air outlet 22, an impeller 36 being adapted to be mounted on the base 24 and having a plurality of blades (not numbered); and a plurality of guiding plates 28 mounted in the air outlet 22 of the casing 12, the guiding plates 28 being aligned along a predetermined direction, the guiding plates 28 are parallel to one another and the guiding plates 28 guiding airflow passing through the air outlet 28 and increasing wind pressure of the airflow when the impeller 36 turns.

Struve et al. do not teach the guiding plates extending in a direction having an inclining angle with an axial direction of the air outlet.

Harmsen in figures 1-5, teaches a heat-dissipating fan comprising: a plurality of guiding plates 14 mounted in an air outlet of a casing 1, the guiding plates 14 being aligned along a predetermined direction and extending in a direction having an inclining angle ( $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$ ) with an axial direction of the air outlet.

Since Struve et al. and Harmsen are analogous art because they are from the same field of endeavor, that is the outlet guiding vanes for axial fan art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the outlet guiding vanes of Struve et al. with the an inclining angle as taught by Harmsen for the purpose of providing an axial fan with low noise and low pressure losses.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al. (4,603,271) in view of Katsui (6,501,652).

Maruyama et al. teach all the claimed subject matter except that they don't teach the casing further includes a side outlet in a peripheral wall thereof and communicated with the air outlet, thereby guiding the airflow out of the casing in a smoother manner.

Katsui in figures 1A and 1B, teaches an axial fan having a casing 10 having a side outlet 13 in a peripheral wall thereof and communicated with the air outlet (not numbered), thereby guiding the airflow out of the casing in a smoother manner.

Since Maruyama et al. and Katsui are analogous art because they are from the same field of endeavor, that is the axial fan art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the casing of Maruyama et al. with the side outlets as taught by Katsui for the purpose of directing the flow of air in a desired direction.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al. (4,603,271) in view of Huang et al. (6,663,342).

Maruyama et al. teach all the claimed subject matter except that they don't teach the each guiding plate has a triangular section.

Huang et al. in figure 7(c), teaches an axial fan having outlet guide vanes the each guiding plate has a triangular section.

Since Maruyama et al. and Huang et al. are analogous art because they are from the same field of endeavor, that is the axial fan art, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the outlet guiding vanes of Maruyama et al. with the triangular shape as taught by Huang et al. for the purpose of reducing production costs.

### ***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of three patents.

Schneider et al. (2,713,967) is cited to show an axial fan having a plurality of outlet guide vanes but fails to teach the guide vanes extending in a direction having an inclining angle with an axial direction of the air outlet.

Rundle (3,144,201) is cited to show an axial fan having a plurality of outlet guide vanes but fails to teach the guide vanes extending in a direction having an inclining angle with an axial direction of the air outlet.

Rosseau (5,342,167) is cited to show an axial fan having a plurality of outlet guide vanes but fails to teach the guide vanes extending in a direction having an inclining angle with an axial direction of the air outlet.

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**Contact information**

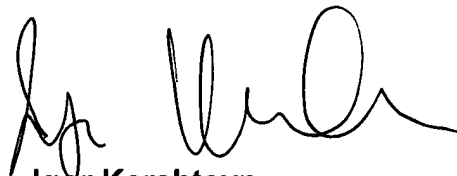
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is (703) 308 8317. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on (703) 308 1044. The fax number is (703) 872-9306.

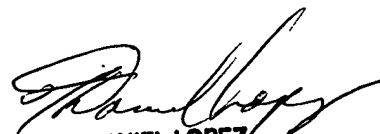
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK

November 17, 2004



Igor Kershteyn  
Patent examiner.  
Art Unit 3745



F. DANIEL LOPEZ  
PRIMARY EXAMINER  
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